

Serial No. 09,593,912
Attorney Docket No. E0897
Firm Reference No. AMDSP0368US

Reply to Office Action Dated February 6, 2004 filed with RCE
and Petition For A One-Month Extension Of Time
Reply Dated May 7, 2004

AMENDMENTS IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A system in a media access controller ~~in a data link layer~~ for communicating to a number of physical layer devices ~~in a physical layer~~, comprising:

a common bus port for electrical coupling to a common bus that is electrically coupled to the physical layer devices, the common bus serving as a direct interface between the ~~data link layer~~ media access controller and the physical layer devices;

logical circuitry to transmit a training sequence from the common bus port to the physical layer devices; and

logical circuitry to transmit a data block from the common bus port to a respective one of the physical layer devices by way of the common bus, the data block being transmitted in one of a number of time slots of a time division multiplexed transmission.

2. (Original) The system of claim 1, wherein the logical circuitry to transmit a training sequence from the common bus port further comprises logical circuitry to transmit a transmit enable signal from the common bus port simultaneously with the data block, thereby indicating a transmission of the data block to the physical layer devices.

3. (Original) The system of claim 1, wherein the logical circuitry to transmit a training sequence from the common bus port to the physical layer devices further comprises logical circuitry to transmit an address designation in each of the time slots.

4. (Original) The system of claim 1, wherein the logical circuitry to transmit a training sequence from the common bus port to the physical layer devices further comprises logical circuitry to transmit a predefined training sequence that provides a reference for the time slots.

Serial No. 09,593,912

Attorney Docket No. E0897

Firm Reference No. AMDSP0368US

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5. (Original) The system of claim 3, wherein each of the address designations is transmitted in a first portion of the corresponding time slot.

6. (Original) The system of claim 5, wherein a predetermined sequence is transmitted in a second portion of the corresponding time slot.

7. (Currently Amended) A system in a media access controller ~~in a data link layer~~ for communicating to a number of physical layer devices ~~in a physical layer~~, comprising:

a processor coupled to a local interface;

a memory coupled to the local interface;

a common bus port coupled to the local interface, the common bus port being adapted for electrical coupling to a common bus that is electrically coupled to the number of physical layer devices, the common bus serving as a direct interface between the data link layer media access controller and the physical layer devices; and

operating logic stored on the memory and executable by the processor, the operating logic further comprising:

logic to transmit a training sequence from the common bus port to the physical layer devices; and

logic to transmit a data block from the common bus port to a respective one of the physical layer devices by way of the common bus, the data block being transmitted in one of a number of time slots of a time division multiplexed (TDM) transmission.

8. (Original) The system of claim 7, wherein the logic to transmit a training sequence from the common bus port to the physical layer devices further comprises logic to transmit a transmit enable signal from the common bus port simultaneously with the data block, thereby indicating a transmission of the data block to the physical layer devices.

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Attorney Docket No. E0897

Firm Reference No. AMDSP0368US

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9. (Original) The system of claim 7, wherein the logic to transmit a training sequence from the common bus port to the physical layer devices further comprises logic to transmit an address designation in each of the time slots.

10. (Original) The system of claim 7, wherein the logic to transmit a training sequence from the common bus port to the physical layer devices further comprises logic to transmit a predefined training sequence that provides a reference for the time slots.

11. (Original) The system of claim 10, wherein each of the address designations is transmitted in a first portion of the corresponding time slot.

12. (Original) The system of claim 10, wherein a predetermined sequence is transmitted in a second portion of the corresponding time slot.

13. (Currently Amended) A system in a media access controller ~~in a data link layer~~ for communicating to a number of physical layer devices ~~in a physical layer~~, comprising:

a common bus port coupled to the local interface, the common bus port being adapted for electrical coupling to a common bus that is electrically coupled to the number of physical layer devices, the common bus serving as a direct interface between the ~~data link layer~~ media access controller and the physical layer devices;

means for transmitting a training sequence from the common bus port to the physical layer devices; and

means for transmitting a data block from the common bus port to a respective one of the physical layer devices by way of the common bus, the data block being transmitted in one of a number of time slots of a time division multiplexed (TDM) transmission.

Serial No. 09,593,912
Attorney Docket No. E0897
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14. (Original) The system of claim 13, wherein the means for transmitting a training sequence from the common bus port to the physical layer devices further comprises means for transmitting a transmit enable signal from the common bus port simultaneously with the data block, thereby indicating a transmission of the data block to the physical layer devices.

15. (Original) The system of claim 13, wherein the means for transmitting a training sequence from the common bus port to the physical layer devices further comprises means for transmitting an address designation in each of the time slots.

16. (Currently Amended) A method in a media access controller ~~in a data-link-layer~~ for communicating to a number of physical layer devices ~~in a physical-layer~~, comprising the steps of:

transmitting a training sequence to the physical layer devices by way of a common bus, the common bus serving as a direct interface between the ~~data-link-layer~~ media access controller and the physical layer devices; and

transmitting a data block to a respective one of the physical layer devices by way of the common bus, the data block being transmitted in one of a number of time slots of a time division multiplexed (TDM) transmission.

17. (Original) The method of claim 16, wherein the step of transmitting a training sequence to the physical layer devices by way of a common bus further comprises the step of transmitting a transmit enable signal to the physical layer devices by way of the common bus simultaneously with the transmission of the data block, thereby indicating a transmission of the data block to the physical layer devices.

18. (Original) The method of claim 16, wherein the step of transmitting a training sequence to the physical layer devices by way of a common bus further comprises the step of transmitting an address designation in each of the time slots.

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Firm Reference No. AMDSP0368US

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19-26. (Cancelled)

27. (New) The system of claim 1, wherein the electrical coupling includes a pin connection on an integrated circuit.

28. (New) The system of claim 1, wherein the electrical coupling includes a plug-in connection on an integrated circuit.

29. (New) The system of claim 1, wherein the electrical coupling includes a pin connection between the media access controller and the physical layer devices in a single integrated circuit.

30. (New) The system of claim 7, wherein the electrical coupling includes a connection on an integrated circuit.

31. (New) The system of claim 7, wherein the electrical coupling includes a plug-in connection on an integrated circuit.

32. (New) The system of claim 7, wherein the electrical coupling includes a connection between the media access controller and the physical layer devices in a single integrated circuit.

33. (New) The system of claim 13, wherein the electrical coupling includes at least one of a pin connection on an integrated circuit, a plug-in connection on an integrated circuit and a connection between the media access controller and the physical layer devices in a single integrated circuit.

Serial No. 09,593,912
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34. (New) The system of claim 16, wherein the electrical coupling includes at least one of a pin connection on an integrated circuit, a plug-in connection on an integrated circuit and a connection between the media access controller and the physical layer devices in a single integrated circuit.
